



Patent and Trademark Office
Under 37 C.F.R. § 1.111
U.S. Appln. No. 10/685,407

Atty. Dkt. No. Q76049

AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [01] with the following paragraph:

The present invention relates to a system and a method for managing an application or software component for use in a device to be controlled in a home network environment, and more particularly, to a system and a method for managing an application wherein a function of a device to be controlled can be dynamically extended by continually updating the application for use in the appliance. The present application is based on Korean Patent Application No. 10-2003-0000058, which is incorporated herein by reference.

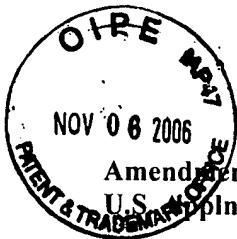
Please replace paragraph [07] with the following paragraph:

As shown in FIG. 1, in a case where a bytecode 121 of a DCM resides in a BAV 120, an FAV 110 causes the bytecode 121 of the DCM to be loaded from a memory of the BAV 120 and the loaded bytecode to be installed therein, when the BAV 120 is connected with the home network system. Alternatively, as shown in FIG. 2, in a case where a bytecode 231 of a DCM resides in a file server 230, an FAV 210 causes a URL of the DCM to be read from a memory of a BAV 120 and then causes the read bytecode 231 to be loaded from the file server 230 and the loaded bytecode to be installed therein, when the BAV 220 is connected with the home network system.

Please replace paragraph [14] with the following paragraph:

Furthermore, the home network middleware may be selected from a group consisting of HAVi, UPnP, Jini and HWW.

Please replace the heading between paragraphs [16] and [17] with the following heading:



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BRIEF DESCRIPTION OF THE DRAWINGS

Please replace paragraph [29] with the following paragraph:

The application server 310 includes a home network middleware module 311 for communicating with the controlled device 320, an application loader module 312 for downloading an application file 331 from the file server 330, and an application management module 314 for controlling operations of the home network middleware module 311 and the application loader module 312. An open services gateway initiative (OSGi) framework 313 is loaded on the application server 310, and the home network middleware module 311 and the application loader module 312 are bundled into the OSGi framework 311.

Please replace paragraph [38] with the following paragraph:

The application server 410 includes a UPnP (control point) CP bundle 411 for controlling UPnP devices, an HTTP (hypertext transfer protocol) web server bundle 412 for downloading an application file from the file server 430, and an application management module 414 for controlling operations of the UPnP CP bundle 411 and the HTTP web server bundle 412. The UPnP CP bundle 411 and the HTTP web server bundle 412 are bundled into an OSGi framework 413.

Please replace paragraph [39] with the following paragraph:

The controlled device 420 includes a UPnP (controlled device) CD stack 421 for notifying its presence to and receiving commands from the application server 410, and a device description 422 for driving the controlled device 402. Positional information 423 (e.g., URL (uniform resource locator) information on drivers) is stored in the device description 422.

Please replace paragraph [45] with the following paragraph:

In a case where it is necessary to install a new application, the application management module 522 determines the location where the relevant application will be downloaded, and then requests the application platform service module 514 to install the necessary application. In response to this request, the application platform service module 514 controls an application loader module 512 to download an application file 531 for the home appliance from a file server 5304, and then, causes the application for the controlled device 520 to be installed by executing the downloaded application file.

Please replace paragraph [58] with the following paragraph:

FIG. 8 is a flowchart illustrating the method for managing the application in the controlled device push mode. For better understanding of the present invention, the method of managing the application according to the application server push mode will be hereinafter explained more specifically with reference to the home network system, for example, configured as in FIG. 6.

Please replace paragraph [64] with the following paragraph:

On the other hand, in a case where it is necessary to delete or update an already installed application, the application management module 622 requests the application platform service module 614 to delete or update the relevant application. In response to the request, the application platform service module 614 performs the operations of deleting or updating the relevant application and then notifies the controlled device 620 of the execution result. (S870 and S880).

Please replace paragraph [70] with the following paragraph:

Furthermore, it has been described in the embodiments that the UPnP is an example of the middleware for communicating between the devices. However, the present invention is not limited thereto, and middleware such as Jini, CORBA (common object request broker architecture) and DCOM (distributed component object model) may be employed in the present invention.

Please replace paragraph [71] with the following paragraph:

Moreover, in the embodiments of the present invention, Java-related platforms such as OSGi and Java-Beans and technologies for loading operating systems such as Microsoft Windows and Linux can be employed as the application installation technologies.